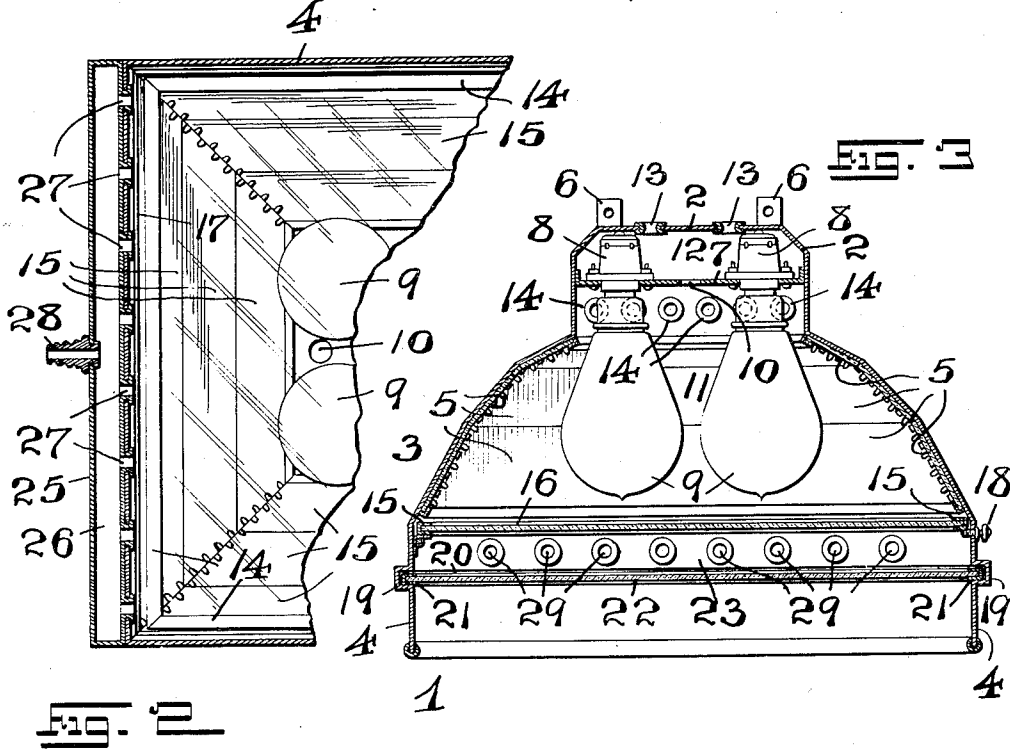
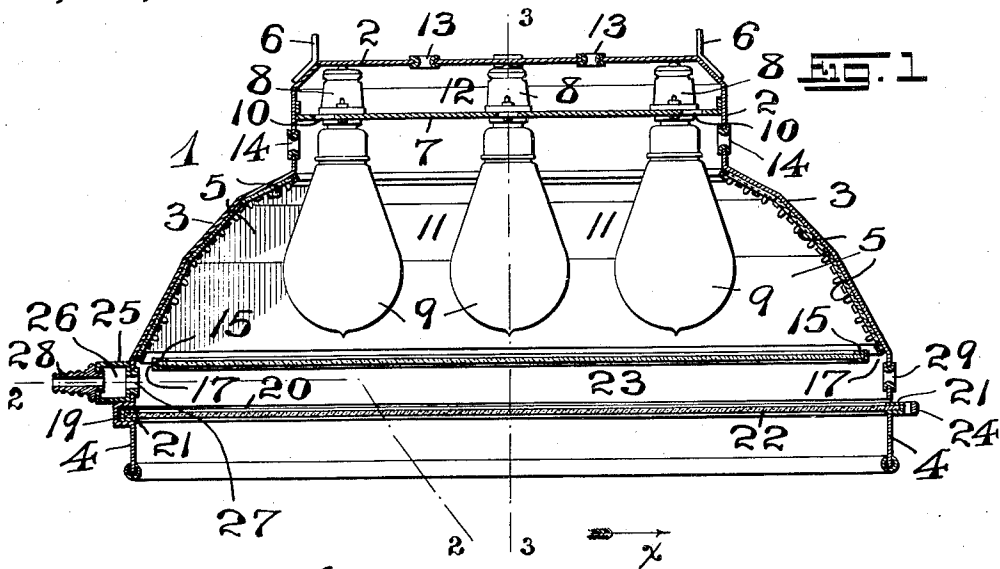


J. MEYER.
VENTILATED REFLECTOR.
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WITNESSES:
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UNITED STATES PATENT OFFICE.

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VENTILATED REFLECTOR.

1,008,661.

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To all whom it may concern:

Be it known that I, JULIUS MEYER, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Ventilated Reflectors; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to characters of reference marked thereon, which form a part of this specification.

The present invention has reference, generally, to improvements in reflectors; and the invention relates, more particularly to a novel construction of ventilated reflector-body.

The present invention has for its principal object to provide a simple and efficient construction of reflector-body adapted to eliminate the descent of heat waves generated with the light rays of illuminating units used with said reflector, by interrupting and deflecting the downwardly descending heat waves and absorbing the same in a cooling circulation of cool air interposed beneath said illuminating units and the locus of illumination.

Other objects of the present invention, not at this time more particularly enumerated, will be clearly understood from the following detailed description of the present invention.

With the various objects of this invention in view the same consists, primarily, in the novel ventilated reflector body hereinafter set forth; and, furthermore, this invention consists in the novel arrangements and combinations of the various devices and their parts, as well as in the details of the construction thereof, all of which will be hereinafter more fully described in the following specification, and then finally embodied in the clauses of the claim which are appended to and which form an essential part of this specification.

The invention is clearly illustrated in the accompanying drawings, in which:—

Figure 1 is a longitudinal vertical section of the novel construction of ventilated reflector body made according to and embodying the principles of the present invention;

Fig. 2 is a detail horizontal section of the same taken on line 2—2 in said Fig. 1, looking in an upward direction; and Fig. 3 is a transverse cross section of the same taken on line 3—3 in said Fig. 1 looking in the direction of the arrow *a*.

Similar characters of reference are employed in all of the hereinabove described views to indicate corresponding parts.

Referring now to the said drawings, the reference-character 1 indicates the complete reflector made according to and embodying the principles of the present invention, the same comprising a dome 2 from which depends a reflector shell 3 terminating at its lower portion in a downwardly depending surrounding apron 4. Said reflector-shell 3 is preferably formed to provide angularly disposed faces. Supported, in any desirable manner, upon the inner sides of said angular faces are a series of reflector members 5, the same being made, preferably, of either plain or corrugated silvered glass. Said dome 2 is also provided with suitably secured and disposed hanger members 6, by means of which said reflector may be suspended. The reference-character 7 indicates a horizontally extending partition member supported within the interior of said dome 2. Secured to said partition-member 7 are a series of lamp sockets 8 from which depend downwardly, beneath said partition member and within said reflector-shell, a series of illuminating units 9. While the illuminating units shown in the drawings are of the electric incandescent type, it will be understood that any desirable kind of illuminating unit or units may be used with the novel reflector body, the illuminating medium being electricity, gas, oil, or any other generating means. Said partition member 7 is provided with a plurality of suitably disposed holes or openings 10 providing communicating air passages between the interior 11 of said reflector shell 3 and the space or chamber 12 above said partition-member 7 within said dome 2. The upper or top wall of said dome 2 is also provided with a suitable number of conveniently disposed escape-holes or openings 13 through which the heated air may escape from the space or chamber 12 in the upper portion of said dome 2. The side walls of said dome 2 are also provided with a plu-

5 rality of air escape holes or openings 14, located beneath said partition-member 7 and adapted to permit the escape of a large portion of the heated air collecting in the interior 11 of said reflector-shell 3.

10 Extending transversely across the bottom portion or mouth of said reflector-shell 3 is a frame-member 15 pivotally connected with the apron 4 of said reflector-shell 3, the same being adapted to support a glass partition member or screen 16. Said partition or screen 16 being constructed slightly shorter than the length of said reflector-shell, so as to provide air-passages or open spaces 17 at each end thereof. The lock-screws 18 arranged operatively in the wall of said apron 4 are adapted to support said partition member or screen in its raised or normal transversely extending position.

20 The said apron 4 is provided with an outwardly extending bead 19 adapted to provide a guide-way 20 in which is slidably supported a frame-member 21 adapted to support a glass partition-member or screen 22, which registers below said partition-member or screen 16 and provides in conjunction therewith an intervening air-space or chamber 23. One end of said apron 4 is provided with an opening admitting said partition member or screen 22 to its guide-way 20, the outer end of said frame-member 21 being provided with a handle-portion 24 for slidably moving said partition member or screen 22, when it is so desired.

35 Secured to the outer side of the wall of the apron 4, at one end of said reflector-shell 3 is distributor box or tube 25 providing an air chamber 26. Said distributor box or tube 25 is provided throughout its length on one side with a series of nozzle or tubular extensions 27 which penetrate the wall of said apron 4 so as to afford communicating air passages between said air chamber 26 and said intervening air-space or chamber 23. Said distributor box or tube 24 is provided with a tubular hose connection 28, whereby an air feed hose may be attached to said distributor box or tube 25 for the purpose of supplying a cooling current of air to be passed through said intervening air space or chamber 23, or a suction hose may be attached for sucking the air through said intervening air space or chamber 23. The opposite wall of said apron 4

55 is provided with a series of suitably disposed holes or openings 29, providing air escape passages through which the air may pass either out of or into the said intervening air space or chamber 23, according to whether forced draft or suction is applied through said air distributing box or tube 25.

The ventilation of the novel reflector constructed as above described is accomplished as follows:—Air is supplied from any convenient source to said chamber 26 provided

by said distributor box or tube 25 and is thence distributed through said nozzles or tubular extensions 27 throughout the interior of said intervening air space 23, whence it escapes through said air passages 29, thus providing an intervening area of cool air interposed between said illuminating units and the locus to be illuminated, thereby preventing the descent of heat waves from within the reflector body. A portion of the air introduced into said intervening air space 23 from said distributor box or tube 25 finds its way through the passages 17 upwardly into the interior 11 of said reflector shell causing a circulation of cool air therein which carries off the heated air through the respective openings or passages 14, 10 and 13, which are located in the upper portions of said reflector body. Of course it will also be apparent that the process of ventilation may be reversed that is the air may be sucked through the intervening air space 23, and the interior of said reflector shell, by exhausting the air from said distributing box or tube 25, if such a manner of ventilation is found desirable.

The construction of ventilated reflector above described is peculiarly adapted for use in the operating rooms of hospitals for illuminating the operating tables, and at the same time preventing the concentration of the heat generated by the illuminating units upon the patient and surgeons and attendants during operations. This construction is also adapted to be used in operating rooms in which either increased air pressure is created, or a reverse condition such as the formation of a vacuum, as will be clearly evident.

I am aware that changes may be made in the general arrangements and combinations of the devices and parts, as well as in the details of the construction of the same, without departing from the scope of the present invention, as set forth in the foregoing specification, and as defined in the claims appended thereto. Hence, I do not limit my invention to the exact arrangements and combinations of the devices and parts described in said specification, nor do I confine myself to the exact details of the construction of the said parts as illustrated in the accompanying drawings.

I claim:—

1. A reflector provided with illuminating units, means for providing an air space in the mouth of said reflector and beneath said illuminating units, and a distributing box providing a distributing air chamber in communication with said air space.

2. A reflector provided with illuminating units, a pair of transparent partition members arranged to provide an intervening air space beneath said illuminating units, and a distributing box secured to said reflector-

body, the same providing a distributing air chamber in communication with said intervening air space.

3. A reflector provided with illuminating units, a pair of transparent partition members arranged to provide an intervening air space beneath said illuminating units, said partition members being arranged to move from their normal inclosing position so as to permit access to the interior of said reflector, and a distributing box secured to said reflector body, the same providing a distributing air chamber in communication with said intervening air space.

4. A reflector provided with illuminating units, means for providing an air chamber in the mouth of said reflector and beneath said illuminating units, a box providing an air chamber secured to said reflector, a series of tubular extensions connected therewith and penetrating the wall of said reflector to afford communicating air passages between said chamber formed by said box and said air chamber in the mouth of said reflector.

5. A reflector provided with illuminating units, a pair of transparent partitions arranged to provide an intervening air space beneath said illuminating units, a box providing an air chamber secured to said reflector, a series of tubular extensions connected therewith and penetrating the wall of said reflector to afford communicating air passages between said chamber formed by said box and said intervening air space, and a pipe connection providing an air passage connected with said box.

6. A reflector provided with illuminating units, a pair of transparent partitions arranged to provide an intervening air space beneath said illuminating units, a box providing an air chamber secured to said reflector, a series of tubular extensions connected therewith and penetrating the wall of said reflector to afford communicating air passages between said chamber formed by said box and said intervening air space, a pipe connection providing an air passage connected with said box and means for permitting the escape of air from said intervening air space.

7. A reflector comprising a reflector shell

closed over in its upper portion, said reflector shell being provided in its upper portion with openings providing air escape passages, illuminating units, means within said reflector shell for supporting said illuminating units, a pair of transparent partition members arranged in the mouth of said reflector-shell to provide an intervening air space beneath said illuminating units, the upper of said partition members being arranged to provide passages affording communication between said intervening air space and the interior of said reflector-shell, a box providing an air chamber connected with said reflector-shell, a series of tubular extensions connected therewith and penetrating within said intervening air space, the lower portion of said reflector shell being provided with air escape openings communicating with said intervening air space.

8. A reflector comprising a reflector shell closed over in its upper portion, said reflector shell being provided in its upper portion with openings providing air escape passages, illuminating units, means within said reflector shell for supporting said illuminating units, a pair of transparent partition members arranged in the mouth of said reflector shell to provide an intervening air space beneath said illuminating units, the upper of said partition members being arranged to provide passages affording communication between said intervening air space and the interior of said reflector shell, a box providing an air chamber connected with said reflector shell, a series of tubular extensions connected therewith and penetrating within said intervening air space, the lower portion of said reflector-shell being provided with air-escape openings communicating with said intervening air space, and a pipe connection providing an air passage connected with said box.

In testimony, that I claim the invention set forth above I have hereunto set my hand this first day of June, 1911.

JULIUS MEYER.

Witnesses:

W. J. MORGAN,
MELONE SPENCER.